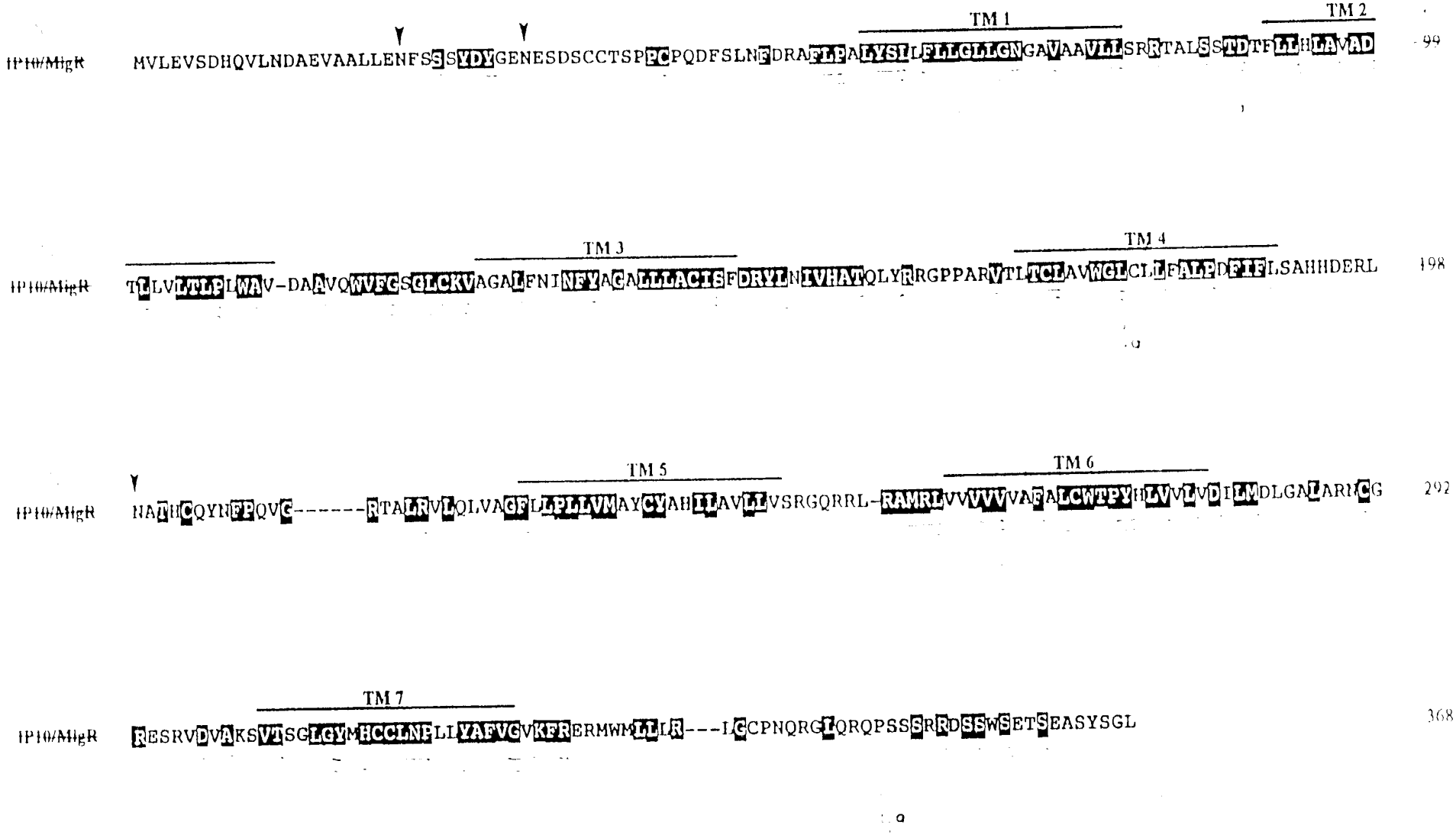
Complete nucleotide sequence of IP10/MigR (MLRA) cDNA

```
CCAACCACAA GCACCAAAGC AGAGGGGCAG GCAGCACACC ACCCAGCAGC      50
CAGAGCACCA GCCCAGCCAT GGTCCTTGAG GTGAGTGACC ACCAAGTGCT     100
AAATGACGCC GAGGTTGCCG CCCTCCTGGA GAACTTCAGC TCTTCCTATG     150
ACTATGGAGA AAACGAGAGT GACTCGTGCT GTACCTCCCC GCCCTGCCCA     200
CAGGACTTCA GCCTGAACTT CGACCGGGCC TTCCTGCCAG CCCTCTACAG     250
CCTCCTCTTT CTGCTGGGGC TGCTGGGCAA CGGCGCGGTG GCAGCCGTGC     300
TGCTGAGCCG GCGGACAGCC CTGAGCAGCA CCGACACCTT CCTGCTCCAC     350
CTAGCTGTAG CAGACACGCT GCTGGTGCTG ACACTGCCGC TCTGGGCAGT     400
GGACGCTGCC GTCCAGTGGG TCTTTGGCTC TGGCCTCTGC AAAGTGGCAG     450
GTGCCCTCTT CAACATCAAC TTCTACGCAG GAGCCCTCCT GCTGGCCTGC     500
ATCAGCTTTG ACCGCTACCT GAACATAGTT CATGCCACCC AGCTCTACCG     550
CCGGGGGCCC CCGGCCCGCG TGACCCTCAC CTGCCTGGCT GTCTGGGGGC     600
TCTGCCTGCT TTTCGCCCTC CCAGACTTCA TCTTCCTGTC GGCCCACCAC     650
GACGAGCGCC TCAACGCCAC CCACTGCCAA TACAACTTCC CACAGGTGGG     700
CCGCACGGCT CTGCGGGTGC TGCAGCTGGT GGCTGGCTTT CTGCTGCCCC     750
TGCTGGTCAT GGCCTACTGC TATGCCCACA TCCTGGCCGT GCTGCTGGTT     800
TCCAGGGGCC AGCGGCGCCT GCGGGCCATG CGGCTGGTGG TGGTGGTCGT     850
GGTGGCCTTT GCCCTCTGCT GGACCCCCTA TCACCTGGTG GTGCTGGTGG     900
ACATCCTCAT GGACCTGGGC GCTTTGGCCC GCAACTGTGG CCGAGAAAGC     950
AGGGTAGACG TGGCCAAGTC GGTCACCTCA GGCCTGGGCT ACATGCACTG    1000
CTGCCTCAAC CCGCTGCTCT ATGCCTTTGT AGGGGTCAAG TTCCGGGAGC    1050
GGATGTGGAT GCTGCTCTTG CGCCTGGGCT GCCCCAACCA GAGAGGGCTC    1100
CAGAGGCAGC CATCGTCTTC CCGCCGGGAT TCATCCTGGT CTGAGACCTC    1150
AGAGGCCTCC TACTCGGGCT TGTGAGGCCG GAATCCGGGC TCCCCTTTCG    1200
CCCACAGTCT GACTTCCCCG CATTCCAGGC TCCTCCCTCC CTCTGCCGGC    1250
TCTGGCTCTC CCCAATATCC TCGCTCCCGG GACTCACTGG CAGCCCCAGC    1300
ACCACCAGGT CTCCCGGGAA GCCACCCTCC CAGCTCTGAG GACTGCACCA    1350
TTGCTGCTCC TTAGCTGCCA AGCCCCATCC TGCCGCCCGA GGTGGCTGCC    1400
TGGAGCCCCA CTGCCCTTCT CATTTGGAAA CTAAAACTTC ATCTTCCCCA    1450
AGTGCGGGGA GTACAAGGCA TGGCGTAGAG GGTGCTGCCC CATGAAGCCA    1500
CAGCCCAGGC CTCCAGCTCA GCAGTGACTG TGGCCATGGT CCCCAAGACC    1550
TCTATATTTG CTCTTTTATT TTTATGTCTA AAATCCTGCT TAAAACTTTT    1600
CAATAAACAA GATCGTCAGG ACCTTTTTTT TTTTTTTTTT TTTTTTTTTT    1650
TTTTTTTTTT TTTTTTTTTT   1670
```

FIGURE 1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TM 2
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MVLEVSDHQVLNDAEVAALLENFSSSYDYGENESDSCCTSPPCPQDFSLNFDRAFLPALYSLLFLLGLLGNGAVAAVLLSRRTALSSTDTFLLHLAVAD
99
TM 3
TM 4
IP10/MigR
TLLVLYTLPLWAV-DAAVQWVFGSGLCKVAGALFNINFYAGALLLACISFDRYLNIVHATQLYRRGPPARVTLTCLAVWGLCLLFALPDFIFLSAHHDERL
198
TM 5
TM 6
IP10/MigR
NATHCQYNFPQVG------RTALRVLQLVAGFLLPLLVMAYCYAHLLAVLLVSRGQRRL-RAMRLVVVVVAFALCWTPYHLVVLVDILMDLGALARNCG
292
TM 7
IP10/MigR
RESRVDVAKSVTSGLGYMHCCLNFLIYAFVGVKFRERMWMLLLR---LGCPNQRGLQRQPSSSRRDSSWSETSEASYSGL
368

FIGURE 2

CCAACCACAA GCACCAAAGC AGAGGGGCAG GCAGCACACC ACCCAGCAGC CAGAGCACCA 60

GCCCAGCCAT GGTCCTTGAG GTGAGTGACC ACCAAGTGCT AAATGACGCC GAGGTTGCCG 120

CCCTCCTGGA GAACTTCAGC TCTTCCTATG ACTATGGAGA AAACGAGAGT GACTCGTGCT 180

GTACCTCCCC GCCCTGCCCA CAGGACTTCA GCCTGAACTT CGACCGGGCC TTCCTGCCAG 240

CCCTCTACAG CCTCCTCTTT CTGCTGGGGC TGCTGGGCAA CGGCGCGGTG GCAGCCGTGC 300

TGCTGAGCCG GCGGACAGCC CTGAGCAGCA CCGACACCTT CCTGCTCCAC CTAGCTGTAG 360

CAGACACGCT GCTGGTGCTG ACACTGCCGC TCTGGGCAGT GGACGCTGCC GTCCAGTGGG 420

TCTTTGGCTC TGGCCTCTGC AAAGTGGCAG GTGCCCTCTT CAACATCAAC TTCTACGCAG 480

GAGCCCTCCT GCTGGCCTGC ATCAGCTTTG ACCGCTACCT GAACATAGTT CATGCCACCC 540

AGCTCTACCG CCGGGGGCCC CCGGCCCGCG TGACCCTCAC CTGCCTGGCT GTCTGGGGGC 600

TCTGCCTGCT TTTCGCCCTC CCAGACTTCA TCTTCCTGTC GGCCCACCAC GACGAGCGCC 660

TCAACGCCAC CCACTGCCAA TACAACTTCC CACAGGTGGG CCGCACGGCT CTGCGGGTGC 720

TGCAGCTGGT GGCTGGCTTT CTGCTGCCCC TGCTGGTCAT GGCCTACTGC TATGCCCACA 780

TCCTGGCCGT GCTGCTGGTT TCCAGGGGCC AGCGGCGCCT GCGGGCCATG CGGCTGGTGG 840

TGGTGGTCGT GGTGGCCTTT GCCCTCTGCT GGACCCCCTA TCACCTGGTG GTGCTGGTGG 900

ACATCCTCAT GGACCTGGGC GCTTTGGCCC GCAACTGTGG CCGAGAAAGC AGGGTAGACG 960

TGGCCAAGTC GGTCACCTCA GGCCTGGGCT ACATGCACTG CTGCCTCAAC CCGCTGCTCT 1020

ATGCCTTTGT AGGGGTCAAG TTCCGGGAGC GGATGTGGAT GCTGCTCTTG CGCCTGGGCT 1080

GCCCCAACCA GAGAGGGCTC CAGAGGCAGC CATCGTCTTC CCGCCGGGAT TCATCCTGGT 1140

CTGAGACCTC AGAGGCCTCC TACTCGGGCT TGTGAGGCCG GAATCCGGGC TCCCCTTTCG 1200

CCCACAGTCT GACTTCCCCG CATTCCAGGC TCCTCCCTCC CTCTGCCGGC TCTGGCTCTC 1260

CCCAATATCC TCGCTCCCGG GACTCACTGG CAGCCCCAGC ACCACCAGGT CTCCCGGGAA 1320

GCCACCCTCC CAGCTCTGAG GACTGCACCA TTGCTGCTCC TTAGCTGCCA AGCCCCATCC 1380

TGCCGCCCGA GGTGGCTGCC TGGAGCCCCA CTGCCCTTCT CATTTGGAAA CTAAAACTTC 1440

ATCTTCCCCA AGTGCGGGGA GTACAAGGCA TGGCGTAGAG GGTGCTGCCC CATGAAGCCA 1500

CAGCCCAGGC CTCCAGCTCA GCAGTGACTG TGGCCATGGT CCCCAAGACC TCTATATTTG 1560

CTCTTTTATT TTTATGTCTA AAATCCTGCT TAAAACTTTT CAATAAACAA GATCGTCAGG 1620

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FIG. 1

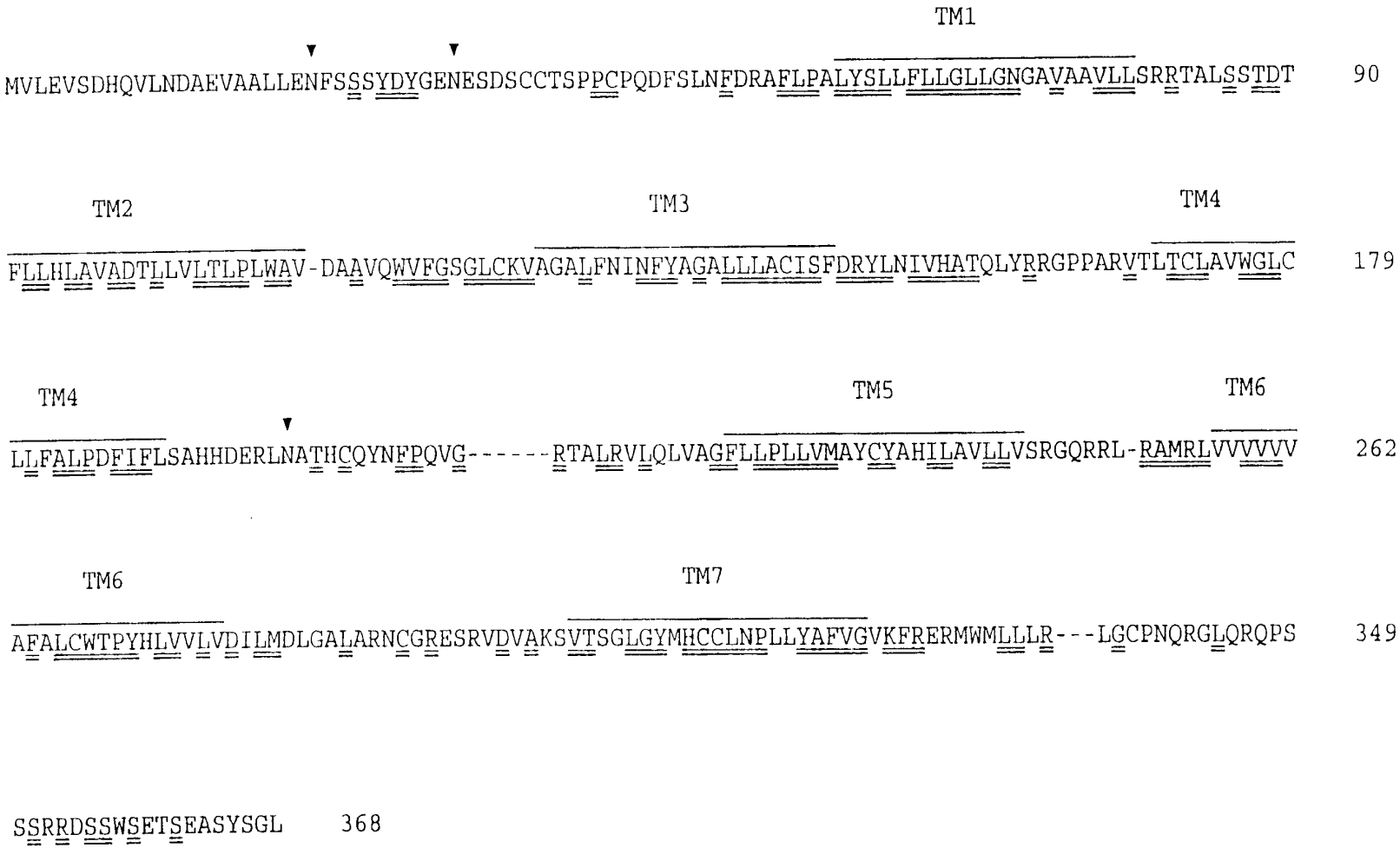
TM1
MVLEVSDHQVLNDAEVAALLENFSSSYDYGENESDSCCTSPPCPQDFSLNFDRAFLPALYSLLFLLGLLGNGAVAAVLLSRRTALSSTDT 90
TM2
TM3
TM4
FLLHLAVADTLLVLTLPLWAV-DAAVQWVFGSGLCKVAGALFNINFYAGALLLACISFDRYLNIVHATQLYRRGPPARVTLTCLAVWGLC 179
TM4
TM5
TM6
LLFALPDFIFLSAHHDERLNATHCQYNFPQVG------RTALRVLQLVAGFLLPLLVMAYCYAHILAVLLVSRGQRRL-RAMRLVVVVVV 262
TM6
TM7
AFALCWTPYHLVVLVDILMDLGALARNCGRESRVDVAKSVTSGLGYMHCCLNPLLYAFVGVKFRERMWMLLLR---LGCPNQRGLQRQPS 349
SSRRDSSWSETSEASYSGL 368

FIG. 2

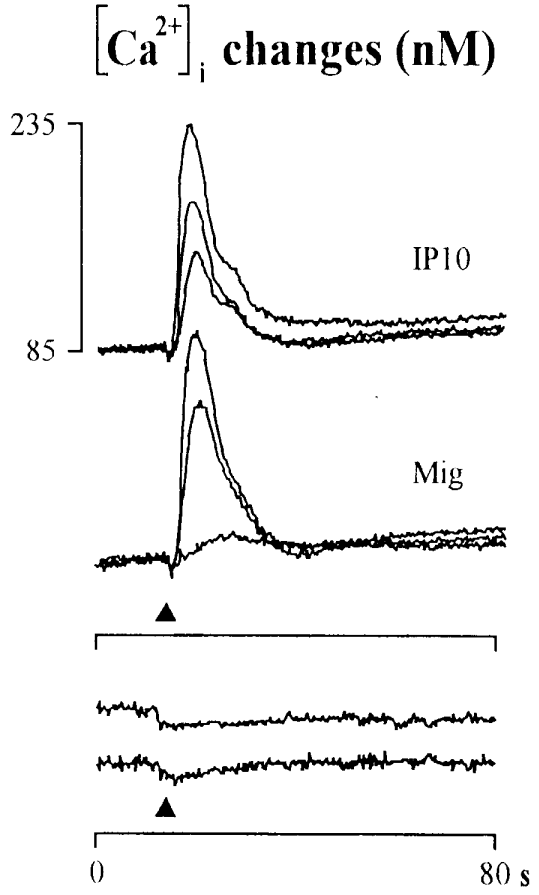

FIG. 3A

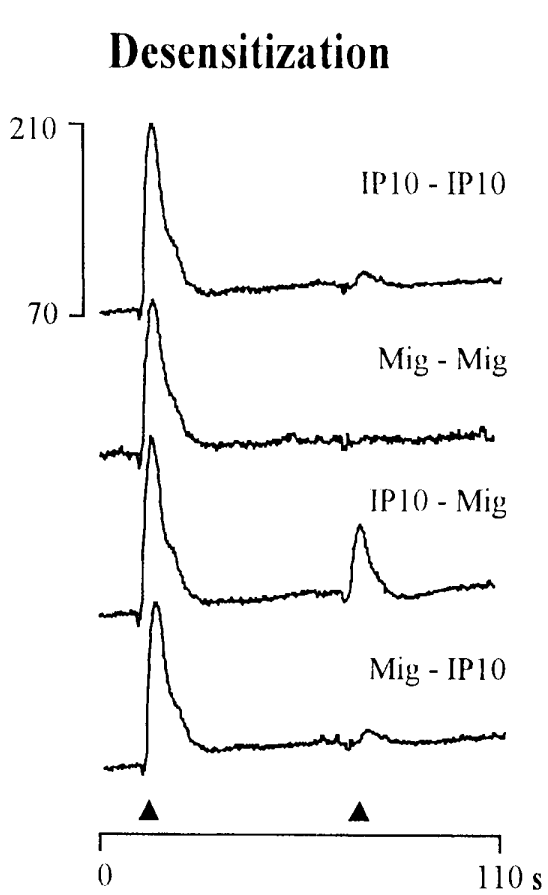

FIG. 3B

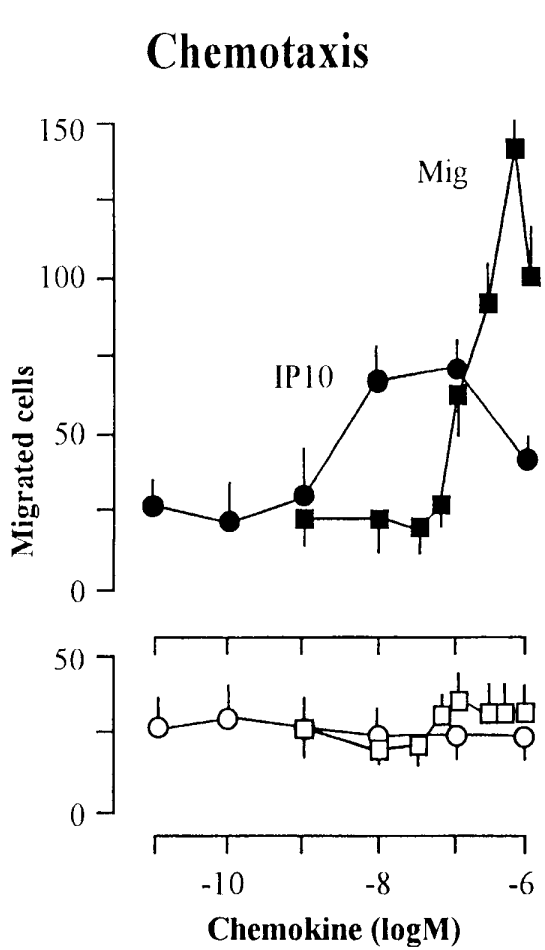

FIG. 3C

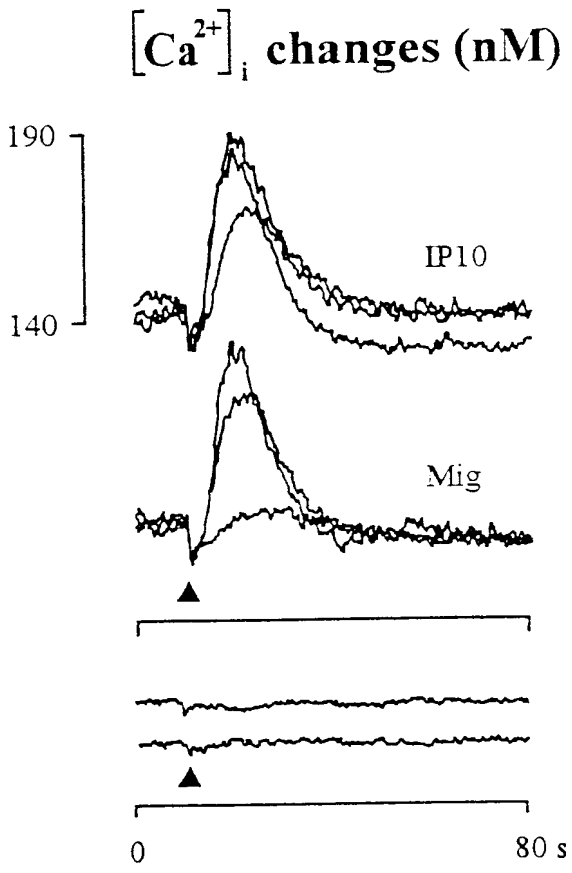
$[Ca^{2+}]_i$ changes (nM)
190
140
IP10
Mig
0
80 s

FIG. 4A

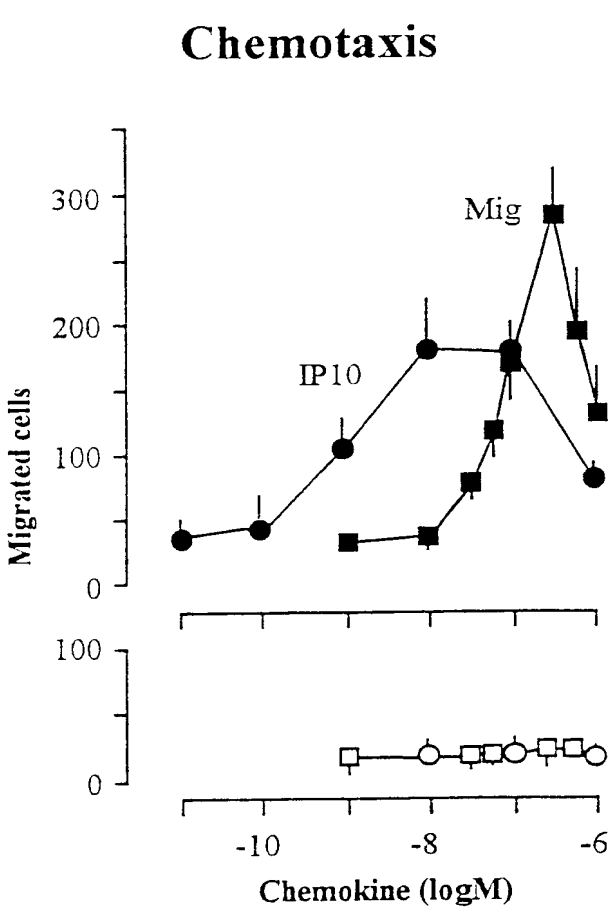
Chemotaxis
Migrated cells
300
200
100
0
100
0
Mig
IP10
-10
-8
-6
Chemokine (logM)

FIG. 4B